

## **REMARKS**

### **I. Status of the Application**

Claims 1-5, and 7-53 are pending. Claims 1, 28, 34, 36, 38, 40-42, and 50 are amended. Claim 47 is cancelled without prejudice. Claims 51-53 are added.

### **II. Claim Rejections**

#### **A. 35 USC § 102**

Claims 1-4, 9-12, 15, 16, 42-46, and 50 have been rejected for allegedly being anticipated by U.S. Patent No. 5,627,470 (“Kuth”).

##### **1a. Claim 1 and the Claims Dependent Upon It Are Not Anticipated by Kuth**

Claim 1 has been amended to recite that the at least one light projector is “bendable along a length” instead of being “flexible,” as previously recited. As shown in the Webster’s II, New Riverside Dictionary, Revised Edition (1966), p. 265 (copy enclosed), one relevant definition of “flexible” is “able to be bent or flexed.” While the definition of “flexible” noted by the Examiner is not a relevant definition when the claims are read in light of the specification, see, for example, Phillips v. AWH Corporation, 415 F.3d 1303, 1319, 1321, 1322, 75 U.S.P.Q. 2d 1321 (Fed. Cir. 2005), the present amendment is being made to advance prosecution of the application.

The light projector in Kuth is not “bendable along a length,” as claimed. As Kuth explains: “deflection optics 32 can be firmly glued to the surface of the pole shoe 10; however, it can also be arranged movable in a guide . . . .” (Col. 3, lines 20-24). Claim 1 and the claims dependent upon it are not, therefore, anticipated by Kuth.

Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

**1b. Amended Claim 1 and the Claims Dependent Upon it Would Not Have Been Obvious In Light of Kuth and the Fiberstars References**

Amended claim 1 and the claims dependent upon it would not have been obvious in light of the Fiberstars® light projector systems described in “Lighting for the 21<sup>st</sup> Century®” (Fiberstars® Reference) cited by the Examiner, or the Fiberstars® product described in the specification.

While describing a light projector with a flexible length, there is no teaching or suggestion in the Fiberstars® Reference that such a projector would be useful in an MRI system. The Fiberstars® Reference states that the Fiberstars® product includes a fixture for “decorative downlighting without heat, ultraviolet radiation or fixture noise. FiberScapes® fixtures are used in landscaping applications for cool, vandal resistant lighting that is not subject to system voltage imbalances.” Attached is a list of applications from Fiberstars® Reference, which lists 52 different applications under the categories of Entertainment, Building Exteriors, Building Interiors, Signage, Water Features, Marine Boating, Residential, Amusement Parks, Safety/Emergency, and Public Projects. None are remotely related to use during an MRI procedure or a medical procedure. While Hospitals are listed under Public Projects, along with Stadiums, Bridges, Tunnels, and Churches, it is clear from the entire list that the use in Hospitals and other Public Projects, as in most if not all of the other listed applications, is for general illumination or for display purposes. Furthermore, there is also no teaching or suggestion in the Fiberstars® Reference that the Fiberstars® light projector is intended to be moved into a plurality of positions for lighting of different sites of interest, after initial positioning.

In addition, the Fiberstars® Reference is not analogous art to amended Claim 1 and the claims dependent upon it. To be analogous art, a reference must be “in the field of applicant’s endeavor or, if not,” the reference must be “reasonably pertinent to the particular

problem with which the inventor is concerned.” MPEP § 2145, IV, citing In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). The products described in the Fiberstars® Reference were not intended to be used in MRI systems or remotely related to MRI systems. They were not, therefore, anywhere “in the field of applicant’s endeavor” or reasonably pertinent.

Even if the Fiberstars® Reference system was analogous art, however, it would not have been obvious to incorporate such a system in Kuth. Kuth states that it is “an object of the invention to provide a magnetic resonance imaging apparatus with an illumination means that makes adequately high luminance for surgical procedures available, but which only insignificantly reduces the structural height of the examination space.” (Emphasis added). In a typical imaging volume of the Assignee of the present application, Fonar Corporation, the poles are separated by about 18 inches. In some commercially available MRI systems, there is even less distance. A patient typically occupies at least about 12 inches of that space. A portly patient may occupy more.

There is no teaching or suggestion in the cited references of how to incorporate a bendable light projector, as in the Fiberstars® Reference, in Kuth, without reducing “the structural height of the examination space.” The Fiberstars® Reference shows a long segmented section with a first end mountable to a support and a second end from which light exits the device. If a Fiberstars® light projector were to be connected to the pole shoe 10 along the central axis of the MRI magnet, as in Kuth, then the light projector would extend straight down, toward the patient. Since there may be only six (6) inches of available room between the poles (or less), as discussed above, it is not apparent that the segmented section of the Fiberstars® light projector could be bent out of the way of the patient, if mounted as taught by Kuth. The presence of the

Fiberstars® light projector within the imaging volume could also interfere with the movement of a surgeon. As discussed above, it is not taught to change the position of the Fiberstars® light projector after set up, either. It would not, therefore, have been obvious to combine Kuth and the Fiberstars® Reference.

Independent claim 1 and the claims dependent upon it, would not, therefore, have been obvious in light of Kuth and the Fiberstars® Reference.

## **2. Claim 42 and the Claims Dependent Upon It**

Claim 42 has been amended to recite “flexing a light projector connected to the MRI magnet assembly to illuminate at least a selected portion of the subject.”

Kuth does not disclose flexing the light projector, as claimed. (According to Webster’s II, New Riverside Dictionary, Revised Edition (1996), a relevant definition of “flex” is “to bend, esp. repeatedly.”). As discussed above, the deflection optics 32 in Kuth is either fixed or movable in a guide. Claim 42 and the claims dependent upon it are not, therefore, anticipated by Kuth.

Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

As discussed above with respect to claim 1, the Fiberstars® Reference system is nonanalogous art and even if it was analogous art, it would not have been obvious to incorporate the Fiberstars® Reference in Kuth, either.

## **B. Rejection under 35 USC § 103**

### **1. Kuth and Torchia**

Claims 5, 17, 18, 19, and 24 have been rejected under 35 USC § 103(a) as allegedly being unpatentable over Kuth in view of U.S. Patent Publication 2004/0249261 (“Torchia”).

Claims 5 and 17 are dependent on claim 1, which should be allowable, as discussed above. Claims 5 and 17 should, therefore, be allowable, as well.

Independent claim 18 defines an open MRI system comprising, in part, a first canopy over a first pole and a light projector connected to the first canopy, “wherein the optical fibers extend through the first canopy at a second location and out of the first canopy through the first location, into the light projector.” These limitations were not addressed by the Examiner in the rejection of claim 18 in the current Office Action. It is noted that claim 18 and the claims dependent upon were found to be allowable in the first Office Action dated August 11, 2005, no new art has been cited, and the reasons for withdrawal of the finding of allowability have not been provided.

Regardless, neither Kuth nor Torchia shows such a configuration. Even if Kuth has a canopy (which is not explicitly disclosed in Kuth), the optical fibers are always shown outside of the poles 10 and the supposed canopy. Similarly, the optical fibers in Torchia are not in any way coupled to the poles or to a canopy.

Claim 18 and the claims dependent upon should, therefore, be allowable, as was found in the first Office Action.

## **2. Kuth and Fiberstars**

Claims 7, 8, 20-23, 40, 41, 47, and 48 have been rejected under 35 USC § 103(a) as allegedly being unpatentable over Kuth in light of the Fiberstars® Reference discussed above. These claims should be allowable for being dependent or allowable claims, as discussed herein.

Withdrawal of the rejections and reconsideration of the claims are respectfully requested.

### **3. Kuth and Damadian**

Claims 29-33, 35, 39, and 49 have been rejected under 35 USC § 103(a) as allegedly being unpatentable over Kuth and Damadian. Independent claim 28, which is listed as rejected in the Office Action Summary, but not in the Office Action, is also discussed here. It is noted that claim 28 and the claims dependent upon them do not “mention specifically an open MRI system,” as stated by the Examiner.

Claim 28 has been amended to incorporate the limitation of claim 37, which the Examiner found to be allowable. Claim 28 and the claims dependent upon it should, therefore, be allowable, as well.

### **III. The New Claims**

New claim 51, which is dependent on claim 28, further requires that the light projector comprises a first end connected to the canopy within the recessed portion and a second end to allow light to exit the light projector, during operation. The limitations of claim 51, which further facilitates positioning of the light projector in the imaging volume without taking up excessive space, are not shown or suggested in the cited references.

Claim 51 should, therefore, be allowable.

New claim 52, which is dependent on claim 51, recites that the light projector is bendable between the first and second ends.

Claim 52 should, therefore, be allowable.

New claim 53, which is dependent on claim 18, requires that the optical fibers extend out of the first canopy substantially parallel to the first pole face. This also facilitates positioning of the light projector in the imaging volume without taking up excessive space and is not shown or suggested in the cited references.

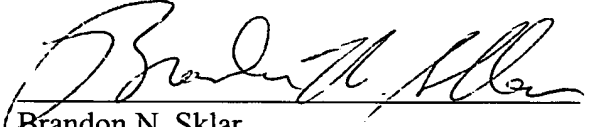
Claim 53 should, therefore, also be allowable.

Entry and consideration of the new claims are respectfully requested.

**IV. Conclusion**

The allowance of the application in light of these Amendments and Remarks is respectfully requested.

Respectfully submitted,  
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